

July 7, 19.

tion, I would like to place in the RECORD at this point a letter on this subject which I received in April of this year, signed by 29 scientists highly knowledgeable in the fields of medical research, medical training, and medical practice. In this letter these distinguished professionals reaffirm their confidence in the integrity of the procedures used in establishing the present radiation protection standards and in the scientific judgment inherent therein.

The letter follows:

ATHERTON, CALIF.  
March 30, 1970.

HON. CHET HOLIFIELD,  
Chairman, Joint Committee on Atomic Energy,  
U.S. Congress, Washington, D.C.

SIR: We are increasingly concerned at the prominence given to the alarmist views of a tiny minority of experts on the effects of ionizing radiation in the general population.

Several reports have appeared suggesting that the authorities responsible for guide lines for the safe uses of ionizing radiation have been grossly complacent and even in error in setting their current radiation standards. Unfortunately, adequate rebuttal requires a somewhat lengthy and technical reply unsuitable for publication in the press.

Such material as is necessary is contained in the publications of Federal Radiation Council (FRC), the National Council on Radiation Protection and Measurements (NCRP) and the International Commission on Radiological Protection (ICRP). These reports show evidence of the great competence of these bodies, and their concern for public health.

The difficulty of presenting an adequately balanced view through the news media has, however, led to some public alarm and loss of confidence. Public confidence in those bodies and individuals responsible for the establishment of radiation safety standards is vital if the development of the peaceful uses of nuclear power and the beneficial uses of ionizing radiation are to move ahead in an efficient and orderly manner.

Bodies of the stature of ICRP, NCRP, and the FRC are under a severe handicap in replying to attacks on their competence representing, as they do, the collective wisdom of many tens or hundreds of experts in widely differing specialties. We, the undersigned, feel it to be necessary at this time to speak out, reaffirming our confidence in the integrity of the procedures used to establish radiation standards. We all assume that, in the absence of firm scientific facts, all unnecessary radiation exposure is to be avoided and, like the FRC, NCRP, and ICRP, agree that standards should be set on the assumption that all man-made radiation is potentially harmful. This concept was introduced into the scientific literature more than twenty years ago and has been discussed since that time. It is most important to stress, however, that it is not yet known with scientific certainty whether radiation exposures at the levels permitted by the radiation standards are deleterious, of no consequence or even beneficial to man. These problems will continue to be subject to scientific investigation until resolved. In the meantime the assumption that all radiation exposure to man is potentially harmful is prudent and is made by all regulatory bodies.

At present FRC recommendations are directly derived from those of the ICRP, an international body that draws upon the accumulated wisdom of experts from the entire world.

In setting the current radiation standards, the ICRP in 1958 considered the then available evidence relating to somatic and genetic damage induced in human beings by radiation. Whenever data were contradictory or obscure the commission consciously and con-

• i.e. double background.

sistently took the more conservative (safer) interpretation. They concluded the risk to the general population due to the development of the nuclear power industry within these safety standards "to be not unacceptable" and indeed very small compared to the risks we subject ourselves to in our everyday lives. At the present time the vast majority of experts in the field of human response to ionizing radiation who have been involved in setting current radiation standards are convinced that these standards are based upon the best scientific evidence available and the deepest concern for public health.

Matters relative to public health should of course be subject to continuous scrutiny, but we believe the record of activities of the ICRP, NCRP, and FRC demonstrates this to be their proven policy.

The ICRP has reviewed its work frequently, most recently in 1969. It has concluded that no change in the relevant safety standards is warranted at the present time. If concerned members of the general public will read the publications of the ICRP, NCRP, and FRC, we are convinced that they will find that current radiation standards are based on a sound foundation.

Finally, it is also relevant to recognize to what extent those involved in the development of the beneficial uses of ionizing radiation have lived within not only the letter of the law but, perhaps more importantly, the spirit of the view of ICRP, NCRP, and FRC that all unnecessary radiation exposure be avoided. Radiation exposures to members of the general population from all man-made sources (excluding medical sources) have been, in fact, only a very small fraction of those permitted by the FRC.

#### LIST OF SIGNATORIES

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(The views expressed here are solely the responsibility of the signers of this document and in no way should be construed as representing a statement of opinion by the institution identified.)

As a further point, since both Drs. Gofman and Tamplin are employees of the Lawrence Radiation Laboratory, which is funded by the Atomic Energy Commission and operated under contract by the University of California, there is some inference that their recommendations to make more stringent the radiation protection standards may in fact be the position of the laboratory. This is not the case and I wish to call this fact to the attention of my colleagues. I would like to place in the RECORD a letter sent by Dr. Michael May, director of the laboratory, to Dr. Glenn Seaborg, Chair-

man of the Atomic Energy Commission, clarifying this situation:

UNIVERSITY OF CALIFORNIA,  
Livermore, Calif., April 8, 1970.

Dr. GLENN T. SEABORG,  
Chairman, U.S. Atomic Energy Commission,  
Washington, D.C.

DEAR GLENN: For the past several months, Drs. Gofman and Tamplin, of this Laboratory, have been making estimates of how much cancer might be caused by exposure to low level radiation. They have called for a lowering of the Federal Radiation Council exposure guidelines by a factor of ten on the basis of their estimates.

I believe, along with a number of other scientists here, that Drs. Gofman and Tamplin have not shown that the guidelines ought to be lowered by a factor of ten. They did not compare the risks of nuclear reactors, for instance, to those of other power sources under similarly conservative assumptions. In fact, they did not estimate realistically the population exposure that would result from present guidelines as they are actually applied. Before deciding whether to lower the guidelines, a comprehensive, realistic, consistent evaluation of the risks inherent in the several competing sources of power (or other applications) should be made. Otherwise, we are not likely to arrive at a balanced set of regulations, that will allow us to obtain power and other benefits at the least overall risk.

The Laboratory has provided the resources for Drs. Gofman's and Tamplin's technical research, including publication of their technical papers. This work consists of taking existing data connecting cancer with radiation at high doses, and extrapolating to low doses on the basis of various assumptions (such as linearity, doubling dose concept, disregard of possible repair mechanisms, etc.). The same type of extrapolation has been made by others, in ICRP publications and elsewhere, although some of the assumptions differed. The assumptions are a matter of debate in the biological community since not enough data and experiments are available to determine the correct ones.

In some statements, Drs. Gofman and Tamplin have treated their connection of low level radiation with cancer as fact or "law", whereas it is really a hypothesis. The hypothesis may or may not be a prudent one from the standpoint of public health planning, but either way, it is not a known fact that "32,000 extra Americans would die of cancer and leukemia if everyone got this 'safe' dose," (i.e., the 0.17 rads per year guideline) as Dr. Gofman states. Treating this hypothesis as fact does not help either the regulation makers who must reach reasonable decisions, or the public who must understand and appraise these decisions.

In summary, over the past several years, the Laboratory provided the resources for Dr. Gofman's and Dr. Tamplin's technical work in connection with these estimates and in other fields. A number of scientists here, however, do not agree with the Gofman-Tamplin recommendations concerning new guidelines. Dr. Gofman's and Dr. Tamplin's search for public support of their recommendations is an activity they carry out as individuals and is not a course of action endorsed by the Laboratory.

Sincerely,

MICHAEL M. MAY,  
Director, LRL, Livermore.

Mr. Speaker, a July 5 article in the Washington Post states that the Atomic Energy Commission has been harassing Drs. Gofman and Tamplin in their work at the Lawrence Radiation Laboratory.